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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,521	03/29/2001	Ssu-Pin Ma	67,200-261	6080

7590 12/31/2002  
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EXAMINER

WARREN, MATTHEW E

ART UNIT PAPER NUMBER

2815

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/821,521

Applicant(s)

MA ET AL.

Examiner

Matthew E. Warren

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

This Office Action is in response to the RCE and Amendment filed on October 15, 2002.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not support the limitation that the bond wire has a minimum of one loop.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (US 6,294,401 B1) in view of Shiga (US 5,396,101).

Jacobson et al shows (fig. 4) a microelectronic fabrication comprising a substrate (410), a spirally patterned conductor layer (426) formed over the substrate wherein the

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spiral pattern terminates in a microelectronic structure (425) formed within the center of the spirally patterned conductor layer. The spirally patterned conductor layer forms a planar spiral inductor and the microelectronic structure comprises a series of electrically interconnected sub-patterns. The substrate is employed within a microelectronic fabrication of integrated circuit microelectronic fabrications. The microelectronic structure is selected from the group consisting of bond pads. The microelectronic structure is actually a capacitor connected with a bond pad. (col. 7, lines 3-30). The spiral pattern is in the shape of a rectangle and comprises more than one loop. The spiral patterned conductor layer is formed of a conductor material consisting of non-magnetic metal (col. 7, lines 3-8). Jacobson shows all of the elements of the claims except the at least four electrically interconnected sub-patterns to attenuate eddy currents in the microelectronic structure. It would have been obvious to one of ordinary skill in the art to form three, four, etc., sub patterns since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Shiga shows (figs. 2 and 3) an inductance element that has a core (14) formed in the center of a substrate. The core comprises a plurality of circuit elements (14a), at least 4 of them. The elements attenuate eddy currents in the structure and ultimately the operating frequency is elevated (col. 4, lines 27-31). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the interconnected sub-patterns of Jacobson by adding more sub-patterns as taught by Shiga to attenuate eddy currents in a microelectronic device and ultimately increase the operating frequency.

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Claim 15, as far as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (US 6,294,401 B1) in view of DiCaprio et al. (US 6,452,278 B1).

Jacobson et al shows (fig. 4) a microelectronic fabrication comprising a substrate (410), a spirally patterned conductor layer (426) formed over the substrate wherein the spiral patten terminates in a microelectronic structure (425) formed within the center of the spirally patterned conductor layer. The spirally patterned conductor layer forms a planar spiral inductor and the microelectronic structure comprises a series of electrically interconnected sub-patterns. Although Jacobson shows bond pads, the bond wire bonded to the microelectronic structure has not been illustrated. DiCaprio et al. shows (fig. 1) shows a semiconductor device in which a die has low loop bond wires (24) connected to bond pads to help minimize the height of the package (col. 2, lines 48-50). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bond pads of Jacobson by attaching a low loop bond wire as taught by DiCaprio to minimize the height of the package.

### ***Response to Arguments***

Applicant's arguments with respect to claims 9 and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

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### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Seefeldt et al. (US 6,310,387 B1) also shows an inductor device having spirally shaped planar coils and circuit components to attenuate eddy currents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (703) 305-0760. The examiner can normally be reached on Mon-Thurs, and alternating Fri, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MEW



December 27, 2002



EDDIE LEE  
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